REMARKS

In response to the Office Action dated January 29, 2003, claims 1, 3, 4, 9, and 21 are amended. Claims 29-31 were previously withdrawn in response to the Restriction Requirement dated November 5, 2002; such claims are withdrawn without prejudice or waiver. Claims 1-28 remain in the present application. It is not the Applicants' intent to surrender any equivalents because of the amendments or arguments made herein. Reexamination and reconsideration of the application are respectfully requested.

Objections to the Drawings

On Page 2 of the Office Action, the drawings were objected to because they did not include reference signs mentioned in the description, because FIGS. 4 and 10 included reference signs that were not mentioned in the description, and because FIGS. 9-12B should be designated with a legend such as "Prior Art." Specifically, the inclination surface 11 was not mentioned in the drawings.

The Applicants thank the Examiner for the thorough examination of the application and drawings. Inclination surface 11 is a typographical error, and should have been referred to as "inclination surface 111" in the specification. The specification has been amended to correct this oversight. Support for this amendment is found, *inter alia*, on page 9, lines 12-13, where inclined surface 111 is properly identified.

With regard to reference numbers 204 and 205 in FIG. 4, these have been amended to reference numbers 104 and 105, respectively. Support for this amendment is found, *inter alia*, on page 11, lines 20-24, where analogous lower electrode 104 and solder 105 are described with respect to FIG. 1.

With regard to reference number 702 in FIG. 10, this has been removed from FIG. 10. No new matter has been added.

Substitute drawing sheets, with Prior Art legends, are respectfully submitted for FIGS. 9-12B.

Applicants respectfully submit that the drawings are now in good order and respectfully request that any objections to the drawings be withdrawn.

Art-Based Rejections

On pages 3-5 of of the Office Action, claims 1-6, 14-18, 21, and 26-28 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the admitted prior art, claims 8 and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the admitted prior art in view of Staskus et al. (USPN 5,923,692), and claims 7,9-13, 19, and 22-25 under 35 U.S.C. § 103(a) as being unpatentable over the admitted prior art in view of Kawamura et al (USPN 6,452,880).

The Applicants respectfully traverse the rejections, and submit that the claims are patentable in light of the clarifying amendments above and the arguments below.

The Admitted Prior Art

The art discussed in the specification in FIG. 9 describes a laserbeam 601 emitted from a semiconductor laser element that is guided to a diffraction grating 602, which generates diffraction lights of 0-order, 1-order, and –1-order. The diffraction lights pass through a collimator lens 603, a half-mirror 604, and an objective lens 605, with a focal point on an optical disk 610. See Specification, Page 1 line 24-Page 2, line 7.

As discussed with respect to FIG. 10, the system of FIG. 9 has inherent tracking errors because the two sub-beams 705 and the laser beam 703 are separated by a distance d, and one of the returning sub-beams 705 reflects from the surface of the sub-mount 704 as reflection light 707. See Specification, page 3, lines 2-10.

The prior art deals with this problem as discussed with respect to FIG. 11.a sub-mount 801 with a side surface that is positioned just below the laser beam emission facet of the chip 701 is inclined at an angle. The lower part of the side surface of the sub-mount is vertical to the upper surface 802 of the sub-mount (and thus parallel to the emission facet of the chip 701). This will reflect sub-beam 705 at twice the angle of inclination. See Specification, Page 3, line 11-Page 4, line 11.

The Staskus Reference

The Staskus reference teaches an edge-emitting diode laser with protective caps mounted on the bars opposite the modules. The caps serve as laser bar protectors during the bar burn-in. See Abstract.

The Kawamura Reference

The Kawamura reference teaches an optical pickup apparatus capable of reading information from recording media of different read wavelengths, including a light-emitter having a first light source for emitting a first laser beam integrated with a second light source for emitting a second laser beam. See Abstract.

The Claims are Patentable over the Cited Reference

The claims of the present invention describe a semiconductor laser device. A device in accordance with the present invention comprises a semiconductor laser chip having an emission facet for emitting a laser beam, and a sub-mount. The sub-mount has a first surface for providing the semiconductor laser chip, and at least one second surface vertical to the first surface. One of the second surfaces, which is arranged in line with the emission facet of the semiconductor chip, is inclined at an angle of 3 to 30 degrees to the emission facet. The second surface which is inclined reflects an incident light orthogonal to the emission surface of the semiconductor laser chip to a different direction in accordance with the angle of the second surface.

The cited references do not teach nor suggest the limitations of the claims of the present invention. Specifically, the cited references do not teach nor suggest the limitation of one of the second surfaces, which is arranged in line with the emission facet of the semiconductor chip, is inclined at an angle of 3 to 30 degrees to the emission facet. The second surface which is inclined reflects an incident light orthogonal to the emission surface of the semiconductor laser chip to a different direction in accordance with the angle of the second surface.

The admitted prior art shows that part of the surface is angled with respect to the emission facet, and part of that surface is parallel with the emission facet. As such, should any sub-beam 705 strike the portion that is parallel to the emission facet, such sub-beam would return to the optical disk. Further, the angled surface shown in the admitted prior art reflects the reflection light back through the laser beam 703 and the other sub-beam 705, which can cause further errors.

The present invention reflects an incident light orthogonal to the emission surface of the semiconductor laser chip to a different direction. This is not taught nor suggested by the admitted prior art. The additional fabrication steps required to make a sub-mount of the admitted prior art add to the cost and manufacturing time which are avoided by the present invention.

The ancillary Staskus and Kawamura references do not remedy the deficiencies of the admitted prior art. As such, none of the references, alone or in combination, teach the limitations of the claimed invention, namely, reflects an incident light orthogonal to the emission surface of the semiconductor laser chip to a different

direction. The Applicants' respectfully submit that the claims are patentable over the cited references, and respectfully request that the rejections be withdrawn.

Conclusion

It is submitted that this application is now in good order for allowance and such allowance is respectfully solicited. Should the Examiner believe that there are matters relating to this continuation application remaining that can be resolved in a telephone interview, the Examiner is urged to call the Applicants' undersigned attorney.

If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at telephone number (310) 337-6742 to discuss the steps necessary for placing the application in condition for allowance.

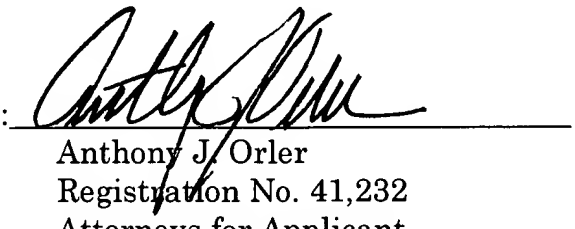
If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,

Koichi GEN-EI

By his attorneys,

Date: April 29, 2003

By: 

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